

Surface Incident Prevention Plan

BOISE AIRPORT

August 29-30, 2001

Introduction

On Thursday August 30, 2001, a Runway Incursion Action Team (RIAT) meeting was convened at the terminal building at Boise Airport (BOI) Boise, ID. The following individuals were present at the RIAT meeting:

Colin Hiebert	FAA BOI Airport Traffic Control Tower (ATCT) Manager
Don Bringmann	FAA Regional RIAT Air Traffic Representative
Jim Greene	FAA Regional Runway Safety Program Manager
Mary Hoy	FAA Regional RIAT Flight Standards Representative
S. Alex Silva	FAA Regional RIAT National Air Traffic Controllers Association (NATCA) Representative
Mark E. Taylor	FAA Regional RIAT Airports Representative
Tom Busker	FAA Regional Executive Manager
Bill Watson	FAA Seattle Airport District Office
Lewis Sanders	FAA BOI Flight Standards District Office (FSDO)
John Goostrey	FAA BOI FSDO Safety Program Manager
Lee Hearst	FAA BOI ATCT
Candance Hardt	FAA BOI ATCT
Gary Allen	Boise Airport
Garry Fraise	Boise Airport
John Dearing	Chief of Pilot Training, Boise Cascade Corp.
Jerry Green	Verde Aviation
Kathy Green	Verde Aviation
Dean Jackson	Turbo Air, Inc.
Lt. Col. Paul Kingsley	Chief of Safety, Idaho Air National Guard
Lt. Col. Mike Bell	C-130 Safety Officer, Idaho Air National Guard
SMSgt James Heiman	Safety Manager, Idaho Air National Guard
Doug Albert	Delta Airlines
Mike Hadyka	SkyWest Airlines Manager
Bob Caldwell	Western Air Express
Britt Talbert	Southwest Airlines
Gary Iverson	Civil Air Patrol, Precision Flight Training
Wayne Winkelkotter	U.S. Postal Service
Terry Light	Northwest Airlines

Background¹

Boise Airport (BOI), a division of the City of Boise Department of Aviation and Public Transportation, is overseen by a seven-member Airport Commission. The Airport includes the 570-acre Gowen Field, a military facility that the Idaho National Guard leases from the City.

Boise's first municipal airport, Boise Air Terminal, was built in 1926 on a gravel bed beside the Boise River where Boise State University is located now. On April 6, 1926, Varney Airlines (merged into United Airlines) flew the first commercial airmail in the United States from Pasco, WA, to Boise, to Elko, NV.

Boise purchased the land for the site of the present airport (a few miles south of downtown Boise) in 1936-1938. In 1939, Varney Airline's old hangar was relocated from the old field to the present one, and it became the terminal building. The Airport, 2868 feet above sea level, covers approximately 4,000 acres.

Today, BOI serves as a major passenger and freight center for the region, including eastern Oregon. The Airport is a base for about 100 organizations and 400 aircraft, including passenger airlines, air cargo companies, air charter businesses, corporate flight departments, and helicopter services. Other tenants include the U.S. Customs Service, the National Interagency Fire Center, the Idaho Division of Aeronautics, the Idaho National Guard, and the Idaho Air National Guard.

BOI has over 50 vehicles to keep the runways open and operational. Normally, it takes about 50 minutes to plow 1-inch deep snow to the edges of the runways and, then, to blow the snow to the infield between the runways. In fog, when the temperature is 27 degrees or less, a fog dispersal system releases carbon dioxide which "freezes" the fog so that it falls as precipitation.

Currently, BOI handles approximately 170,000 operations annually, of which 80% are IFR (instrument) flights and 20% are VFR (visual) flights. Approximately 60% of Boise air traffic operations are general aviation (including military). The remainder is air carrier and air taxi operations.

BOI experienced a rate of 2.34 runway incursions or surface incidents per 100,000 operations in calendar year 2000. As of August 8th, Boise has had 6 surface incidents and 2 runway incursions in calendar year 2001.

Proceedings

Wednesday evening, August 29, 2001, the Runway Safety Action Team met with Boise Airport operations personnel and Boise Airport Traffic Control Tower personnel to review the status of their on-going efforts to reduce runway incursions. The group performed an evening evaluation of the airfield and inspected the "hot spots" (known areas on the airport movement area that have caused problems in the past) and other areas of the airfield where surface incidents and runway incursions had occurred. The group also discussed the Boise Airport Layout Plan and comments

¹ Information from the FAA Air Traffic Activity Data System (ATADS) website <<http://www.apo.data.faa.gov/>>, Boise Airport website <<http://www.cityofboise.org/transportation/airport/>>, and the February 2001 Boise Airport Master Plan <<http://www.cityofboise.org/transportation/airport/mstrpln.asp>>.

received from the FAA, especially in regard to signs and markings for the Runway 10L approach area.

Thursday, August 30, 2001

Thursday morning, members of the Runway Incursion Action Team, additional FAA personnel, BOI ATCT personnel, and Boise Airport operations personnel performed a daylight inspection of the entire airfield. The group tour included analyzing the best ways to reinforce the visual cues available to pilots and vehicle operators at hot spots and other areas of the airfield where surface incidents and runway incursions had occurred.

The Runway Incursion Action Team meeting convened in the main conference room in the terminal of the Boise Airport at 10:30 A.M.

Mr. Jim Greene, FAA Regional Runway Safety Program Manager, opened the meeting, introducing the members of the Regional Runway Safety Team and stated the reasons why runway incursion prevention is a priority with the FAA. Jim passed out handouts of the agenda, diagrams depicting Boise Airport and locations of past surface incidents and runway incursions, and textual descriptions of each incident at Boise Airport since 1998.

Incidents at Boise Airport

BOI	1998	1999	2000	As of 24 Aug 2001
Runway Incursions	0	3	2	2
Surface Incidents	1	3	2	6
Total	1	6	4	8

After introductions of all the participants, Jim provided an overview of the Runway Safety Program to include National and Regional runway incursion statistical data. During his presentation, he focused on the need to find local solutions to the continuing problem of adapting to changing airport conditions, and offered examples of marking and signage that have proved effective at other airports.

Jim introduced Mr. Colin Hiebert, Manager of the Airport Traffic Control Tower at Boise Airport, who discussed the changes in tower procedures and training that stress prevention of surface incidents and runway incursions. Colin also emphasized how the air traffic personnel operate as a team.

A presentation by Mr. Gary Fraise, Security/Operations Manager for Boise Airport, outlined the steps BOI has taken, and is taking, to inhibit runway safety incidents. The signs, lighting, and markings on the airport are maintained in an excellent manner. All the runway holding position markings have been increased in size, outlined in black, and glass beads have been added to the yellow paint. Improvements in internal and external communications, plus more vigilance in airport and tenant operations are key points of emphasis. The Airport has had no pedestrian surface incidents due to good fencing and access control procedures. A vehicle service road

provides ground vehicle access around all runways, eliminating the need for vehicles to cross the runways. Recently, a semi-truck caused a surface incident on Taxiway A, a rarity for Boise.

Based on the evening and daylight evaluations of the airfield, along with the facts offered in the presentations, the participants discussed appropriate actions to help solve the continuing, local, pilot deviation problems. The group talked about their experiences with the hot spots, and shared their ideas on how to reduce incidents at Boise Airport. Concerns were addressed and recommendations were made as noted below.

Attached, as an addendum to these minutes, is a copy of the Boise Airport surface inspection report from the FAA Flight Inspection Operations Division. The flight check crew conducted this inspection on August 29-31, so that the crew's findings could be included in the RIAT discussions. Restoring the Instrument Landing System at Boise precluded completion of the surface inspection before the RIAT ended. Jim Greene was able to join the flight inspection crew in the last portion of their airport inspection on August 31st.

A flight inspection crew includes two airspace-system inspection pilots and one flight inspection technician. At the request of the Runway Safety Program, these surface inspections are included in their regular airborne inspection of navigational aids (also known as "Flight Check") to ensure the integrity of the nation's instrument approaches and airway procedures. The Lear-60 crew, which inspected Boise, is based in Sacramento, CA.

Findings and Conclusions

A previous Action Item from the existing Surface Incident Prevention Plan below is shown in regular type. New action items, notes, and completion dates revised as of this August 30, 2001, RIAT are shown **in bold type**.

For each Action Item a Responsible Local Office/ Organization and Responsible FAA Regional Oversight Office is identified in parenthesis. An Expected Action Completion Date (EACD) and an estimated cost are given for each Action Item.

Action I – Boise Airport will double the width of taxiway centerline markings to twelve inches to increase operator awareness. (taxiway centerline to be widened is from taxiway A to the 10L hold line on the west end only). (EACD) 07/01/01). **COMPLETED**

Action II – Boise Airport will implement additional signs at approach end of Runway 10L and Juliet intersection (AIRPORT AUTHORITY) (EACD 07/01/01). Signs ordered, awaiting delivery (EACD 09/01/01). **Still waiting for new signs to be delivered (09/30/2001).**

The RIAT focused on improving visual cues at the intersection of Taxiways A and J, and for the holding position of Runway 10L. The confusing nature of this area has contributed to several runway incursions and surface incidents. Additional signage and markings are recommended to provide pilots and ground vehicle operators with unambiguous information prior to their decision points. Action Item II has been expanded to reflect these recommendations.

- a. Install a runway direction sign **(←10L)** on the left side of Taxiway A prior to the divergence of Taxiway J.
- b. Install above-ground runway guard lights on each side of the Runway 10L holding position on Taxiway A. *(Part of the previous SIPP Action Item).*
- c. Provide a surface painted runway position sign at the Runway 10L holding position.
- d. Change the current runway holding position sign and taxiway location sign from **(A) (10L)** to **(A) (28R – 10L)** in order to provide an additional visual cue and differentiate this sign from the **(J) (10L - APCH)** sign which pilots see first as they taxi north on Taxiway A (even though it is beyond the Taxiway A turn).
- e. Relocate the **(J) (10L - APCH)** sign and the associated holding position marking on Taxiway J as specified in the FAA comments to the BOI Airport Layout Plan. Also provide a **(J) (10L - APCH)** sign on the right side of Taxiway J at the new location.
- f. On the left side of the Taxiway A yellow center marking, prior to the divergence of Taxiways A and J, provide a surface painted direction sign **(←10L)**. On the left side of the Taxiway J yellow center marking, just past the divergence of Taxiways A and J, provide a surface painted direction sign **(↑J)**

(Responsible Local Office/ Organization: BOI Airport)

(Responsible FAA Regional Oversight Office: ANM-620)

(EACD 5/2002)

(Estimated Cost \$100,000 – \$250,000 depending on final design)

Aviation Safety Program Pilot Safety Meeting

Thursday evening August 30, 2001, the FAA Runway Safety Program and the FAA Aviation Safety Program sponsored an Aviation Safety Program Pilot Safety Meeting in the State Department of Transportation Auditorium in downtown Boise. The meeting was held from 7:00 PM to 9:00 PM and included presentations by John Goostrey, FAA Safety Program Manager from the Boise Flight Standards District Office, and Jim Greene, FAA Northwest Mountain Region Runway Safety Program Manager. Approximately 60 local pilots attended and were briefed on the findings of the RIAT and participated in an airport signs & markings quiz and discussion.

Participants viewed a runway safety video and discussed general runway concerns and some issues specific to Boise Airport. Members of the Runway Incursion Action Team answered questions from the audience.

KBOI BOISE, ID		BOISE AIR TERMINAL/GOWEN FIELD		Status: COMPLETE		
Runway 10R		Procedure # S-8-5-1		Inspection Date: 8/31/01		
		Completed Date: 8/31/01				
Runway/ Taxiway	Intersection/ Direction	Category	Type	Condition	Reported Date	Comments
10R	departure end	LIGHT	RWY CENTERLINE	SEE COMMENTS	8/31/01	Noted dislodged seal approx. 1800 ft from dep end.
K	B, eastbound	SIGN	TWY DIRECTION	MISSING	8/31/01	Add sign for "B" with left arrow to existing box on east end of grass area, west of radar antenna.
J	apprch K & F	SIGN	TWY LOCATION	MISSING	8/31/01	Add "K" & "F" signs to backside of existing boxes on west end of each TWY.

KBOI BOISE, ID		BOISE AIR TERMINAL/GOWEN FIELD		Status: COMPLETE		
Runway 28L		Procedure # S-8-6-1		Inspection Date: 8/30/01		Completed Date: 8/30/01
Runway/ Taxiway	Intersection/ Direction	Category	Type	Condition	Reported Date	Comments
28L	approach end	MARK	RWY CENTERLINE	OBSCURED / RUBBER	8/30/01	

FAA/ AVN-200 (Flight Inspection Operations Division)Surface Inspection Reports for Boise

KBOI BOISE, ID BOISE AIR TERMINAL/GOWEN FIELD Status: COMPLETE Runway 10L Procedure # S-8-7-1 Inspection Date: 8/29/01 Completed Date: 8/29/01						
Runway/ Taxiway	Intersection/ Direction	Category	Type	Condition	Reported Date	Comments
10L	approach end	MARK	RWY CENTERLINE	SEE COMMENTS	8/29/01	Observation: red staining noted on 1 st 1000 feet of RWY 10L.
taxiways	interagency fire ctr.	MARK	TWY CENTERLINE	SEE COMMENTS	8/29/01	Observation: red staining exiting interagency fire center.

KBOI BOISE, ID BOISE AIR TERMINAL/GOWEN FIELD Status: COMPLETE Runway 28R Procedure # S-8-8-1 Inspection Date: 8/29/01 Completed Date: 8/29/01						
Runway/ Taxiway	Intersection/ Direction	Category	Type	Condition	Reported Date	Comments
A	northwest of E	DIAG	SEE COMMENTS	SEE COMMENTS	8/29/01	Wind cone depicted on diagram is not actually there.
28R	approach end	MARK	RWY CENTERLINE	SEE COMMENTS	8/29/01	Observation: red staining on 1st 1000 feet of RWY 28R.
28R	approach end	MARK	RWY CENTERLINE	OBSCURED / RUBBER	8/29/01	